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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/018,312

10/29/2001

Juergen Michel

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EXAMINER

MEEK, JACOB M

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/018,312	MICHEL ET AL.	
	Examiner	Art Unit	
	Jacob Meek	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16 - 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) 17 - 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: MMI (specification designates MI page 13, line 17). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Claim Objections

3. Claims 16, 17, 28, 29, 30 are objected to because of the following informalities:
Claims 16, 29, and 30 do not define values for j and k associated with K1 and K2.

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Claims 17 and 28 do not include a definition of variable "a". Claim 28 needs to include a more detailed description as to the construction of sequence generation, as written it is very broad.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 16, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popovic (US Patent 6,567,482).

With regard to claim 16, Popovic teaches a method of synchronizing a base station with a mobile station comprising the steps of forming at least one of the partial signal sequences being a Golay sequence $X_n(k)$ of length $n_x = n_1 = 16$ using the following relationship:

$$X_0(k) = \delta(k)$$

$$X'_0(k) = \delta(k)$$

$$X_n(k) = X_{n-1}(k) + W_n * X'_{n-1}(k - D_n)$$

$$X'_n(k) = X_{n-1}(k) - W_n * X'_{n-1}(k - D_n)$$

$$k = 0, 1, 2, \dots, 2^{N_X-1}$$

$$n = 1, 2, \dots, N_X$$

$$D_n = 2^{P_n}$$

Where

$$n_x = 16 = 2^{N_X}$$

$$NX = 4$$

$\delta(k)$: Kronecker delta function (see column 10, lines 31 – 42 where these equations are interpreted as being equivalent and inclusive), and taking permutation P and unit variable W used to form a partial signal sequence from permutation pairs (see column 10, lines 50 – 64 where this is interpreted as inclusive). Popovic is silent with respect to signal sequence being formed using rule $K(i) = K2(i \bmod n2) * K1(i \text{ div } n2)$, for $i = 0, \dots, n1*n2-1$. Popovic states the synchronization sequences can be constructed in variety of ways (see column 10, lines 7 – 30). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize Popovic teaching to derive a Golay sequencer to improve memory efficiency and complexity (see column 11, line 54 – 60).

With regard to claim 29, Popovic teaches that the method of claim 16 is useful in a base station transceiver (see column 5, lines 18 – 27).

With regard to claim 30, Popovic teaches that the method of claim 16 is useful in a mobile station transceiver (see column 5, lines 18 – 27).

Allowable Subject Matter

5. Claims 17 – 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Cited Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tong et al (US Patent 6,839,876), Natali (US Patent 5,717,713) teaching coding techniques related to area of invention. NPL document (TSGR1#3(99)205) appears directly related to applicant's invention and seems to be

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a public domain document of some sort. Other NPL references are cited to show related teachings.

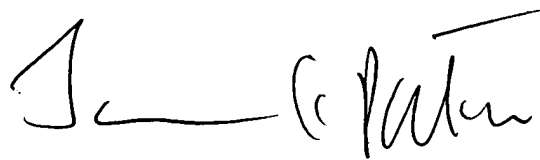
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM



JAY K. PATEL
SUPERVISORY PATENT EXAMINER